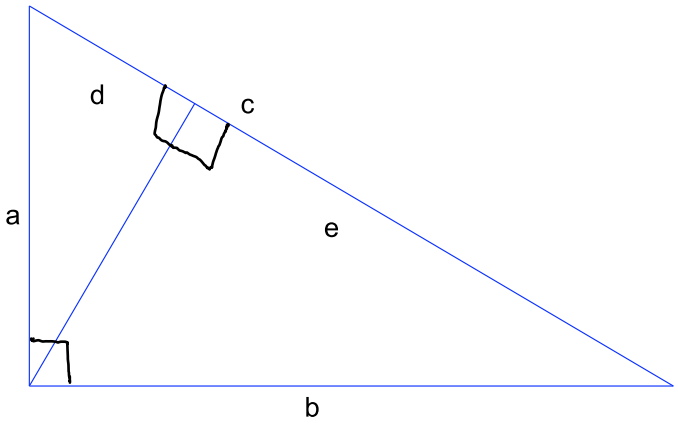
Geometry 9.3 Notes: Pythagorean Theorem & Converse



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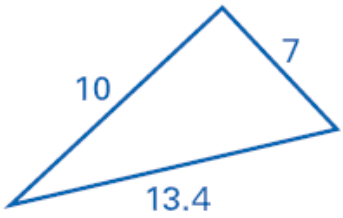
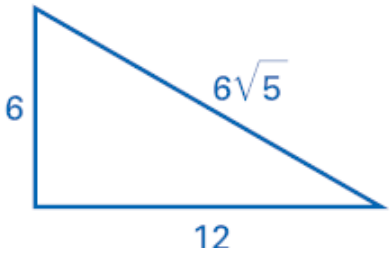
Examples: The triangles below appear to be right triangles. Tell whether they are right triangles.

1.



2.



Decide whether the set of numbers can represent the side lengths of a triangle. If they can, classify the triangle as right, acute, or obtuse.

3. 8, 18, 24

4. 3.2, 4.8, 5.1

GRAND AVENUE BY STEVE BREEN

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<u>Guided Practice:</u> Decide whether the set of numbers can represent the side lengths of a triangle. If they can, classify the triangle as right, acute, or obtuse.

3. 12.3, 16.4, 20.5

4. 8, 40, 41

<u>Example:</u> You want to make sure a wall of a room is rectangular.

5. A friend measures the four sides to be 9 feet, 9 feet, 40 feet, and 40 feet. He says these measurements prove the wall is rectangular. Is he correct?

6. You measure one of the diagonals to be 41 feet. Explain how you can use this measurement to tell whether the wall is rectangular.

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Guided Practice

7. Decide whether a parallelogram with side lengths 18 feet, 18 feet, 24 feet, 24 feet and diagonal length 30 feet is a rectangle.

8. Describe how to use the converse of the Pythagorean Theorem.

9. How would you classify triangles with sides lengths 6, 9 & 10.